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Monographs on education

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DEPARTMENT OF EDUCATION
UNIVERSAL EXPOSITION, ST. LOUIS, 1904

MONOGRAPHS ON EDUCATION
IN THE
UNITED STATES

EDITED BY
NICHOLAS MURRAY BUTLER
President of Columbia University in the City of New York

14

ART AND INDUSTRIAL EDUCATION

BY
ISAAC EDWARDS CLARKE
Bureau of Education, Washington, D. C.

DEPARTMENT OF EDUCATION
UNIVERSAL EXPOSITION, ST. LOUIS, 1904

Chief of Department
HOWARD J. ROGERS, Albany, N. Y.

MONOGRAPHS
ON
EDUCATION IN THE UNITED STATES

EDITED BY
NICHOLAS MURRAY BUTLER
President of Columbia University in the City of New York

- 1 EDUCATIONAL ORGANIZATION AND ADMINISTRATION—ANDREW SLOAN DRAPER, *President of the University of Illinois, Champaign, Illinois*
- 2 KINDERGARTEN EDUCATION—SUSAN E. BLOW, *Cazenovia, New York*
- 3 ELEMENTARY EDUCATION—WILLIAM T. HARRIS, *United States Commissioner of Education, Washington, D. C.*
- 4 SECONDARY EDUCATION—ELMER ELLSWORTH BROWN, *Professor of Education in the University of California, Berkeley, California*
- 5 THE AMERICAN COLLEGE—ANDREW FLEMING WEST, *Professor of Latin in Princeton University, Princeton, New Jersey*
- 6 THE AMERICAN UNIVERSITY—EDWARD DELAVAN PERRY, *Jay Professor of Greek in Columbia University, New York*
- 7 EDUCATION OF WOMEN—M. CAREY THOMAS, *President of Bryn Mawr College, Bryn Mawr, Pennsylvania*
- 8 TRAINING OF TEACHERS—B. A. HINSDALE, *Professor of the Science and Art of Teaching in the University of Michigan, Ann Arbor, Michigan*
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- 10 PROFESSIONAL EDUCATION—JAMES RUSSELL PARSONS, *Director of the College and High School Departments, University of the State of New York, Albany, New York*
- 11 SCIENTIFIC, TECHNICAL AND ENGINEERING EDUCATION—T. C. MENDENHALL, *President of the Technological Institute, Worcester, Massachusetts*
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- 13 COMMERCIAL EDUCATION—EDMUND J. JAMES, *Professor of Public Administration in the University of Chicago, Chicago, Illinois*
- 14 ART AND INDUSTRIAL EDUCATION—ISAAC EDWARDS CLARKE, *Bureau of Education, Washington, D. C.*
- 15 EDUCATION OF DEFECTIVES—EDWARD ELLIS ALLEN, *Principal of the Pennsylvania Institution for the Instruction of the Blind, Overbrook, Pennsylvania*
- 16 SUMMER SCHOOLS AND UNIVERSITY EXTENSION—GEORGE E. VINCENT, *Associate Professor of Sociology, University of Chicago; Principal of Chautauqua*
- 17 SCIENTIFIC SOCIETIES AND ASSOCIATIONS—JAMES MCKEEN CATTELL, *Professor of Psychology in Columbia University, New York*
- 18 EDUCATION OF THE NEGRO—BOOKER T. WASHINGTON, *Principal of the Tuskegee Institute, Tuskegee, Alabama*
- 19 EDUCATION OF THE INDIAN—WILLIAM N. HAILMANN, *Superintendent of Schools, Dayton, Ohio*
- 20 EDUCATION THROUGH THE AGENCY OF THE SEVERAL RELIGIOUS ORGANIZATIONS—DR. W. H. LARRABEE, *Plainfield, N. J.*

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ART AND INDUSTRIAL EDUCATION

I. INTRODUCTION

Since 1870 the rapidity of the development of art and industrial education in the United States has been so marked and so effective, the rapid increase in the number of special schools and museums of the fine arts so striking, as to make exceedingly difficult a satisfactory survey of this subject within the limits of a monograph.

The movement for the general introduction of drawing in the public schools, and of definite endeavors to promote art education, with a purpose to develop and improve the art industries of a people, seemed alike sudden in England and in the United States. In England it was apparently the definite result of the first world's fair—the exhibition of 1851. In the United States it had its origin in Boston, in 1870, where it was a direct outcome of the English movement.

The Centennial exhibition in Philadelphia in 1876, where the work in drawing of the Massachusetts normal art school, and of the public schools in Boston, was shown, made possible the rapid and remarkable development throughout the United States of the two kindred elements in education, namely, industrial art drawing and manual training. This addition of these two new studies to the regular courses of the public schools has been, perhaps, the most notable characteristic educational feature of the past two decades.

As the English were long held to be a people hopelessly inartistic and devoid of art possibilities, their wonderful development since 1851, in so many lines of artistic manufactures, challenges investigation, especially by a people long similarly accused as being innately inartistic, and for a long period, it must be admitted, apparently deservedly so accused.

The causes of this lack of art development as recited by

Haydon, were the same in both countries. That these causes were amply sufficient to account for this almost entire absence of any national evidence of art consciousness,—without compelling the admission of any inborn lack of mental capacity,—Haydon sought to demonstrate, by an appeal to the art development of England during the thirteenth century: “When England, in her knowledge of form, colour, light, shadow, and in fresco decoration, was in advance of Italy; and had her progress not been checked by the reformation, would have been at the head of Europe.” “Show the people of England fine works,” said Haydon; “give them the opportunity of study and the means of instruction; teach them the basis of beauty in art, and then give your opinion, if you like; but you have no right to condemn your fellow countrymen when you give them none of the advantages foreigners enjoy; when you have no schools for art instruction, no galleries open to public view, no national collections, no schools of design, and when you refuse to allow that art has a public function, and absolutely withhold from it all public support.”

However true is his picture of the absence of any opportunities for the people to see works of art, or to enjoy any personal training in the elementary knowledge of art, in the England of his day, the lack of all such opportunities in the United States was tenfold greater. The Puritan immigrants of New England had all the abhorrence of art which marked the followers of the reformation, and for two centuries the bare whitewashed walls of their plain meeting houses were eloquent in protest against the art adornments of ancient church or chapel. Nor did the long hard struggle to wrest sustenance from stony soil and stormy sea afford any space of leisure for those artistic occupations which to the stern puritan were worse than folly.

Such was the situation, alike in England and the United States, during the first half of the nineteenth century. The exhibitions of 1851 and of 1876 seem in turn to have revealed to each people their own artistic deficiencies.

II. PROGRESS OF ART EDUCATION

In 1749, Benjamin Franklin published his proposed "Hints for an Academy," and enumerated as the most useful studies, arithmetic, writing, drawing and mechanics. In this connection drawing is seen to be reckoned with mechanics as a useful study. So, more than a hundred years before Boston had put drawing into its public schools, this Boston boy sought to have his fellow citizens of Philadelphia adopt it in their schools as a required study.

In a Lancastrian school presided over by Mr. Fowle in Boston in 1821, the method prevailed of having the younger pupils taught by those of their fellow pupils a little in advance of them. This method was, in its fundamental idea, successfully adopted by Walter Smith, in his first introduction of drawing as a required study in the public schools of Boston, and has since been followed in many of the public schools throughout the country. This arose from the fact that, as the teachers in the elementary schools were in addition to their duties in teaching other studies unexpectedly to be called on to teach drawing, of which they had before little or no knowledge, it was inevitable that they could then be but little in advance of their pupils in their knowledge of this new study; the teachers could only teach the lessons they had just previously been taught in the weekly lessons given to the public school teachers by the new director of drawing and his assistants.

In the case of the pupils of the normal art school, subsequently established under the director, Professor Walter Smith, and in those attending the various state normal schools, as well as in the fact that drawing has long been a regular study in the public schools, the teachers in the public schools of to-day may fairly be assumed to have as much practical knowledge of this study as of any of the others intrusted to their care.

The arguments for the teaching of drawing in the public schools are clearly and concisely stated by Mr. Fowle in his

introductory words to the third edition of his book on drawing, issued in 1830. Mr. Fowle also introduced in his school physical science, music, and, for the girls, needlework. In this sewing form of "manual training" Miss Dorothy Dix, later the noted philanthropist, was his first teacher. So it appears that our modern new educational movement was clearly foreshadowed in this Boston school three-quarters of a century ago!

In 1838 Henry Barnard, editor of the *American journal of education*, delivered an address in many parts of the country on the topic of industrial education and urged that drawing should be taught in the public schools. In the *Connecticut common school journal*, published in Hartford, of which Dr. Barnard was editor, he reprinted the report of Professor Stow on Prussian schools, made to the legislature of Ohio in 1838. In occasional numbers during succeeding years much attention was given to the subject of drawing in its various phases. In 1838-9 Miss E. P. Peabody gave a course of free lessons in drawing in the Franklin school, Boston, and in 1841-2 a similar course to a class of one hundred teachers of primary schools. Miss E. P. Peabody and her sister, Miss Mary Peabody (later Mrs. Horace Mann), each published an elementary treatise illustrating their methods of teaching drawing and reading.

Such is a brief summary of a few of the early efforts by American educators to introduce the study as one of the essential elementary studies to be taught in all public schools. Similar vain efforts to promote the early training in drawing were from time to time made by leading artists. Among these perhaps the most notable and earnest attempt was made in Philadelphia by the distinguished artist Rembrandt Peale during the years 1840-1844.

As in Boston and in Philadelphia, earnest efforts to introduce the study of drawing in the schools long preceding 1870, had been successfully thwarted by the opposition based chiefly on ignorance and lack of appreciation; so it resulted in Baltimore, when in 1848-9 Mr. William Minifie,

a remarkable man, taught drawing in that city as a science, and not simply as picture making. This competent master was, however, removed through the influence of an unsympathetic, ignorant committeeman, and so Baltimore lost the opportunity, else within reach, of anticipating the success of Boston by a quarter of a century. Mr. Minifie published his system of teaching, drawing, and perspective and shadows, which has long held its place as a recognized authority. About 1852 this work was adopted as one of the regular text-books, used in the South Kensington art schools of London, England, and which, it may be fairly assumed, Walter Smith studied; at least the underlying principles of the system of Professor Minifie and those of Professor Walter Smith are practically identical. As professor of drawing in the School of design of the Maryland institute in 1852-1854, Professor Minifie delivered and published three public addresses on drawing and design; in these the teaching of drawing as a regular study in the public schools was eloquently urged.

To one who remembered the ability and methods of Professor Minifie, and the work done by his pupils of the high school, as far back as 1848, the exhibition made of drawings by the Baltimore high school, in the Centennial exposition in Philadelphia, in 1876, was pitiful indeed.

Cleveland, Ohio, seems to have been more fortunate than the cities whose experience has just been briefly recited. In 1849 drawing was put in the schools as a regular exercise, and after a few months was intrusted to the regular teachers of the public schools, who eventually found in the late Professor John Brainerd an enthusiastic instructor, who took such interest in their work that he followed them to the schools and aided them in teaching the pupils; in the end the professor was put in charge of the work in all the schools, and for several years remained with gratifying results. He published a manual for use in the schools. Subsequently Professor Brainerd was for years an examiner in the U. S. patent office in Washington.

In this brief summary of various sporadic efforts in different cities and communities to introduce drawing in the schools, it is clear that the desirability of general instruction of the school children in drawing was in the process of becoming a popular belief, and, in American communities, this is usually the precursor of legislative action.

While these efforts, as we have seen, had been confined to no single section or state, and, indeed, in some towns and cities drawing had already secured foothold in the schools. the movement in Boston, and in a degree through the state of Massachusetts, was more pronounced than elsewhere.

In this state certain studies which are required to be taught in all public schools are enumerated in the law, while certain other studies are recorded as permissible at the discretion of the school committee. Thus, the trend of the upward and onward direction in the progress of elementary education is indicated by the appearance of certain studies as "permissible."

In the law of 1860 "algebra, vocal music, drawing, physiology and hygiene" are thus recorded as permissible. This is believed to be the first legal recognition of drawing in this category. In 1869 the board of education is directed to prepare a plan for free instruction of men, women and children in mechanical drawing, applicable to all towns and cities of 5,000 inhabitants or more. In the law of 1870 "drawing" appears as a required study in all public schools, and "any city or town having more than 10,000 inhabitants shall annually make provision for giving free public instruction in industrial or mechanical drawing, either in day or evening schools under direction of the school committee."

The annual reports of the board of education of Massachusetts, about that time, show great interest in promoting the study of drawing, and later in developing technical industrial education with special reference to the manufacturing interests of the state.

In the report of 1870-71 "the Worcester county free

institute of industrial science"¹ in the city of Worcester, incorporated in 1865, is highly praised and pointed out as the only school in the state where such an education can be obtained.

As already indicated, the history of the slow development of the artistic training of youth in this country closely resembled in its several stages that of its progress in England, though, happily, there is here no story of individual effort and failure quite so tragic as that of the unfortunate Haydon, though the story of the last days of Walter Smith in America, just before his return to his native country, where he was gladly welcomed to an honorable career, all too brief, owing to his untimely decease, is not one to be dwelt on by Americans with any especial pride. He brought rare and precious gifts to America, while to his splendid abilities as a great teacher, and to his contagious enthusiasm, which inspired the eager youth who clustered about him, the final success of the new elements in popular education—industrial art and manual training—are more largely due than to any other single influence.

Although, during a century of progress, sporadic efforts were made in various localities to introduce the teaching of drawing in schools there was no permanent or general success. It was not till the system of public schools had become general, and the experiment of teaching the same thing at the same time, to a large number of pupils, had been proved feasible, that the time was ripe for the general introduction of industrial drawing and of manual training. Before this the teaching of drawing had been a personal matter between pupil and teacher, and no conception that it was possible to teach the elements of drawing to large classes at once had dawned upon educators.

The so-called "farm schools," which had a certain vogue in the earlier years of the present century, had proved failures as might easily have been foreseen, since it was not

¹ Name changed by act of legislature, in 1877, to "The Worcester polytechnic institute."

found feasible to work young men for remuneration so constantly, as was requisite to make them self-supporting as well as school-supporting, while taxing them with the mental work essential to their obtaining anything that would merit the name of an education.

A tendency towards something of this impossible nature is still occasionally manifested by the over-zealous advocates of industrial training, pure and simple, but it is to be hoped that the "farm schools" experience will suffice to restrain the present movement from like disaster. Elementary training in industrial art and in manual training has in these latter years been successfully introduced in many public schools of country and town. "Higher education" in each of these directions, as in all others, must be provided, either by the community or by individual benefactors. It is never, in any form, self-supporting, as the endowed literary and scientific colleges, the schools of technology and the professional schools attached to the universities witness.

In the first annual report made by General John Eaton, commissioner of education, in 1870, there appeared an interesting record of the results attained from an effort to ascertain the direct worth to a workingman of the education given in the common elementary public schools. The concurrence of testimony showing that even this small portion of knowledge and mental training was of real pecuniary value to its recipient, was convincing, leaving no room for question but that the community was amply repaid for all the cost of the common schools, by the increased earning power of their pupils. If this was true of a course of study simply giving the elements of knowledge, the inference is logical, that those forms of education which gave direct capacity for higher grades of productive work must be so much the more valuable. In the progress of the concurrent educational movement of that time, looking to the development on the one hand of industrial facility, and on the other to that of artistic power, the commissioner was greatly interested, especially in the Massachusetts experiment of intro-

ducing the study of elementary drawing — essential to both phases of the movement — in all the public schools of the state.

It was with the purpose of recording for the information of the educators of the country, the progress of this Boston experiment that the preparation of the "Circular of education, No. 2, 1874,"¹ was undertaken by the present writer in 1873.

This movement was begun in Boston by the well-known educator, long the city superintendent of schools, the late Hon. J. D. Philbrick, and the late Hon. Charles C. Perkins, — the latter, the leading authority in the city in all matters relating to the fine arts, — in connection with some of their associate members of the city board of education.

Their purpose was to introduce the study of drawing as one of the required studies in the common schools of the city and state.

They were fortunate in securing, in 1870, the services of a leading English art master, the late Walter Smith, who was made "art director," in charge of drawing in the schools of the city and the state.

In this pamphlet, of some 56 pages, brief statements of the desirableness of such elementary art training in our American schools, and of the efforts made by European countries to promote such art training among their people, were given. Especial mention was also made of the English efforts both to develop artistic industries and to extend the teaching of drawing throughout their schools by means of the South Kensington institution. In addition it was sought to give a brief account of such art institutions and collections as were open to the public in the United States; to take an inventory, as it were, of the means at hand for the development of art education in this country. No list of such public art collections existed, and the attempt to secure such a list was undertaken with all the resources of the United States bureau of education. The trivial result

¹ Circular of Education. Drawing in the Public Schools. The Relation of Art to Education.—Washington, 1874, pp. 56.

of all this effort, as shown by the four pages of scattering statistics at the end of the circular, was ludicrous, while the poverty of the United States in art treasures available for the public, as thus exposed, was appalling. The interest taken by educators and the public generally in this small pamphlet, in view of the world's fair to be held in Philadelphia in 1876, in which coming event increasing interest was shown, and its efficacy in securing information, before so difficult to procure, led to the plan of further publications in the same line, and to the preparation by the present writer, as author and editor, of the special report upon the world movements in the development of artistic and industrial education and of like movements throughout the United States, since issued by this bureau in four large volumes.¹ As there was little literature available concerning this comparatively new educational movement, and none at all within reach of the majority of the teachers of the country, copious appendices were added to each volume of this report. Those in Part I, given to "drawing in public schools," were made up largely of occasional addresses and lectures delivered to teachers by American and foreign leaders of the movement; of practical papers with programmes of courses in drawing; of historical papers relating to the movement, and of abstracts showing the aid given to this form of education by foreign governments, and especially by that of Great Britain. Each volume had in its appendix similarly appropriate papers, and was thus designed to be, in a measure, an encyclopedia relating to its subject.¹

¹ Titles of the volumes of the special report already issued, "U. S. Department of the Interior, Bureau of Education, John Eaton, Commissioner.

"Art and Industry. Education in the Industrial and Fine Arts in the United States. By Isaac Edwards Clarke, A. M. Part I. Drawing in Public Schools. Washington: Government Printing Office. 1885. Pp. CCLIX, 1-842."

Part II. W. T. Harris, U. S. Commissioner. Industrial and Manual Training in Public Schools. 1892. Pp. CXLVIII, 1-1338.

Part III. W. T. Harris, U. S. Commissioner. Industrial and Technical Training in Voluntary Associations and Endowed Institutions. 1897. Pp. LIII, 1-1145.

Part IV. W. T. Harris, U. S. Commissioner. Industrial and Technical Training in Schools of Technology and in U. S. Land Grant Colleges. 1898. Pp. LVI, 1-1020.

Parts V & VI. Relating, severally, to Public Art Schools and to Public Art Museums. (In preparation.)

In view of the later development of the movement, attention is called to the title of the circular "Drawing in public schools—the relation of *art* to education," as indicative of the purpose of those who introduced the new study into the curriculum of public school studies.

In view of the marvelous progress in providing educational facilities for art and art industrial development, that has gone on in the United States since the publication of this little pamphlet in 1874, I venture to quote from it a couple of pages showing the author's belief in the American possibilities of such development a quarter of a century ago.

AMERICAN FACILITIES FOR GENERAL INTRODUCTION OF ART TRAINING

While, in the countries of Europe, whatever relates to the people in education, as in other matters, is in the control and general direction of the central government, so that what the central power decides to do is readily and immediately set in motion throughout the entire country, in the United States there is wisely no such central control. This power inheres to the states and to the local communities within the states. This very circumstance though somewhat, it may be, delaying the adoption of useful measures, yet renders the wise adaptation of training to the peculiar industries and needs of the various parts of the country far more probable. It is readily seen that the kind of special technical training would vary, as it was applicable to a manufacturing, a farming, or a mining community.

INFLUENCE OF LOCALITIES ON ART DEVELOPMENT

Indeed, this has already been exemplified in a marked degree in the different developments of the schools of science in the several states, adapting themselves in their chief courses of instruction to the industrial demands of their localities. So we may hope to have in the art future of this country, as have the different European countries, art capitals famous for their peculiar developments, and queening

it over their own states, as do Dresden and Munich and Florence, and the other famous homes of art. San Francisco, Saint Louis, Cincinnati, Chicago, Cleveland, Pittsburgh, Philadelphia, New York, Boston, New Haven, Worcester, and many other prosperous cities and towns may become in time great centers of beauty as well as of commerce, each having its own special development, varying in architecture according to the building material most conveniently accessible, and in art production and artistic manufactures according to their special industries and resources; but all alike affording to their children thorough technical training, and all attractive, because, everywhere, the eye rests on noble buildings; when the homes of industry shall also be homes of beauty, and to walk through the city streets shall be of itself an art education, as of old in Athens, as it was in many a mediæval town, and is still, in many an ancient city of France, Germany, Italy, and far-off Spain.

Now, drawing is the very alphabet of art (for art is but a language), the one essential requisite preliminary to any artistic or technical training; and, if it is desirable that the children of the public schools shall be fitted to become, if they wish it, skilled workmen in any branch of industry, it is necessary that they shall be taught to draw correctly. To those to whom art means higher things, as they suppose, than its application to every-day utensils and mere manufactures; who look for grand galleries of pictures and statues, and to all the higher refinements of cultured art, it may be a suggestive reflection that, among a people ignorant of drawing, and whose daily surroundings, as is true of most of the American people, afford few suggestions of art in any of its forms, high art must ever remain an exotic, and native artists be rarer than the fabled phoenix.

A country's art, like all its other developments, must be based primarily upon the characteristics of its people. Where all are judges of art, great artists arise, just as great warriors among nations of soldiers, so that until the com-

mon people know the language of art, and can comprehend the meaning of line and color and form, the artist is as much out of place and as little to be looked for as a great author would be among a people ignorant of reading.

Nor has it ever been otherwise. The history of art is the history of peoples. Nor is there anything little or common in the eyes of art. The people that produced great buildings, fine paintings, and noble statues, had also the most exquisite household utensils. Their commonest articles, whose fragile beauty has outlasted the centuries, to-day, with subtle grace and perfect form, tease the eye of the artist and challenge in vain our most skilled artisans to reproduce them. The antique eastern dish of burned clay is held by the modern *connoisseur* as of more worth than its weight in silver; yet it was once in as humble and universal use as the commonest crockery of our kitchens.

Great collections, museums, art galleries, much as they may contribute to the self-satisfaction of cliques and cities, will be of the slightest possible value and barren of results, either upon the industries of the people or their art culture, so long as drawing is not generally understood.

Whoever succeeds in having all the public school children of the country properly trained in elementary drawing will have done more to advance the manufactures of the country, and more to make possible the art culture of the people, than could be accomplished by the establishment of a hundred art museums without this training. Just as libraries are worthless to those who cannot read, so are art collections to those who cannot comprehend them; just as all literature is open to him who has learned to read, so is all art to him who has learned to draw, whose eye has been trained to see, and his fingers made facile to execute. We have begun at the wrong end; we asked for art galleries when we needed drawing schools. But the evil is not irremediable. Let drawing be generally taught, and our art galleries and museums, poor as they are, will at once grow more and more valuable, for they will then begin to be of use.

MASSACHUSETTS THE FIRST STATE TO ACT

The legislature of Massachusetts, moved thereto by the persistent efforts of a few cultured and public-spirited citizens, who realized the imperative need and demand for such training in the public schools, passed an act in 1870 making drawing one of the studies of the public schools, and also making the establishment of free drawing classes for adults obligatory upon all towns and cities containing over ten thousand inhabitants. In pursuance of this law, Mr. Walter Smith, "art master, London, late head master of the Leeds school of art and science and training school for art teachers," was invited, both by the city of Boston and by the state of Massachusetts, to come from England and introduce the new study into the schools of the city and of the commonwealth. Mr. Smith was highly recommended by the Kensington school authorities. He was appointed state director of art education, and has been unremitting in his efforts to introduce drawing into the public schools, and to foster the establishment of classes for adults. Mr. Smith was also appointed general supervisor of art in the Boston schools.

He published, in 1872, a large illustrated work upon art education,¹ which is indispensable to a thorough investigation of the subject, and will be found full of practical suggestions to those wishing to introduce the study into the schools.

SUMMARY OF THE CONDITION IN THE UNITED STATES OF EDUCATION RELATING TO ART IN 1874

It is only necessary for the American people to be convinced that a want exists to cause them to supply it. Believing the lack of provision for industrial and general art training in our present system of public education to be such a want, I have sought to show

¹ "Art Education, Scholastic and Industrial, by Walter Smith, art master, London, late head master of the Leeds school of art and science, and training school for art teachers, now professor of art education, Massachusetts," with illustrations. James Osgood & Co., Boston, 1872, pp. 398.

First. The need of preliminary instruction in drawing, its utility, and the practicability of its introduction into all grades of the public schools.

Secondly. What steps have been taken towards introducing it and how it can best be done.

Thirdly. The present condition of the means for industrial art training in technical schools, including the schools of science.

Fourthly. The means possessed by our higher institutions of learning for giving general knowledge of art.

Fifthly. The special schools existing for training professional artists.

Sixthly. The steps that have been taken for founding great art museums in connection with art-training schools.

We find that in one state, Massachusetts, drawing has been by law introduced into all the public schools, and a state normal art school established; that in many cities and towns in other states drawing has been more or less taught in the public schools; that in all the "schools of science," where engineering is taught, mechanical drawing is of necessity taught.

SCHOOLS OF DESIGN

In schools for the practical teaching of art, as applied to industry and manufactures, the free industrial classes for adults in Massachusetts, the Lowell free school of industrial design at the Boston institute of technology, the schools of Cooper union, the Philadelphia school of design for women, and the school of design of the University of Cincinnati complete the short list.

SCHOOLS OF ART

For the special training of artists we have the schools of the National academy of design, New York, the Yale school of fine arts, New Haven, and the new college of fine arts in the Syracuse university, which comprise all at present existing. The San Francisco school is soon to open. The school

of the Pennsylvania academy of fine arts will resume active operations on the completion of the new building.

ART DEPARTMENTS IN COLLEGES AND UNIVERSITIES

Of the colleges possessing any special collections or facilities for giving any instruction in art, even the most general, we find, excepting Yale and Syracuse, with their special art departments, only Harvard, University of Michigan, Cornell, Rochester university, the college of Notre Dame and Vassar college, out of the hundreds of colleges of the country, that either give any art training or possess any art collections, however small or incomplete.

PUBLIC ART MUSEUMS AND GALLERIES

There remain, then, but the public art institutions which we have already described; there are four of these in the whole land: at Boston, New York, Washington and San Francisco.

The Metropolitan museum of New York, the Brooklyn art association, the Boston art museum, the Corcoran art gallery and the Art association of San Francisco are admirable instances of the methods by which communities and individuals in this country voluntarily provide those institutions for which, in other lands, the government alone is looked to.

An important means of art culture, and the only one which has appealed to the general public, is found in the public art exhibitions. To those of the Metropolitan museum, National academy, the Boston athenæum, the Yale art school, the San Francisco art association, and the permanent exhibitions of the Corcoran art gallery, I have already referred.

LOAN EXHIBITIONS

It would not be difficult to obtain collections of fresh works of the artists for exhibition and sale in connection with the loan exhibitions of works of art belonging to citizens that have been already suggested.

The popularity of exhibitions of good pictures, as attested by the throngs of visitors that attend them and the crowds

that visit the saloons of the leading picture dealers in the large cities, who hold perpetual exhibitions in a small way, sufficiently shows the public interest in art. Indeed, with the multiplicity of American tourists in Europe in these days, it would be strange if the love was not awakened. There are quite a number of well-known private art collections in the leading cities which, separately, would make a desirable public gallery, and from which, as the Metropolitan museum has shown, a loan collection of rare works can be made for public exhibition.

While I have recorded the paucity of institutions capable of giving a thorough art training and the few public art collections now in this country, it is, nevertheless, apparent that there already exists in all the leading cities the material which needs only to be made available, to afford all necessary facilities for general and technical art training; and if it shall be undertaken in earnest, there is possible in this country a development, both in industrial art and in what are called the higher branches of art, which, at the end of twenty-five years, will render obsolete the verdict passed upon us at the World's fair in 1851 and never yet reversed. Here there is opened a field of honorable rivalry between the several states, cities, and towns of the Union. What England has done in this direction we can do, and the more readily that we have the advantage of her experience. No time or force need be wasted. We have but to adopt and modify the methods so thoroughly tested there to the different conditions that may exist in our several communities.

I commend this subject of the relation of art to education to the consideration not only of all educators but to all who are interested in the varied manufacturing industries of our many states. Skill is the modern secret of success. Science becomes ever more certainly the measure of prosperity. Science underlies and must precede art; it is the strong substructure upon whose fixed foundations she builds her palace walls. In the common schools the children of America must be trained to draw if her artisans

are to hold their own in the world's contest, and if her artists are to enshrine her history.

If they but will it, the "republic of the people" shall become the home of an art as noble and as enduring as that which glorified the "republic of princes," whose palaces for so many centuries have lifted their stately walls above the waves, guarding for mankind, not the trophies of her warriors nor the wealth of her merchants, but the priceless work of her humbler artists.

Tintoretto, Titian, and Veronese are still fresh in men's memories, though the names of doge and patrician have faded from recollection.

In the tables of statistics of "museums of art and archæology for 1873," given in the circular, there were but thirteen institutions in all. Of these the two since reckoned among those having the leading art collections of the country, were but at the beginning of their history. The Corcoran art gallery of Washington, D. C., founded in 1869 by the late W. W. Corcoran, Esq., and by him richly endowed, had about one hundred paintings, mostly the private collection of the founder, and a collection of nearly two hundred casts of antique sculpture.

The Metropolitan museum of art of New York, founded in 1870, by a few citizens, lovers of art, had but a small endowment contributed by citizens and had, in its first modest home down town, as the nucleus of the magnificent and varied collections which now, in 1899, crowd the stately halls and galleries of its majestic palace in Central park, the Cesnola collection of Cyprian sculptures, ceramics and glass, and a small collection of paintings, the latter mostly loaned.

In the 25 pages of statistics of art institutions for 1881-82, given in Part I of the special report, are recorded 37 "institutions affording art instruction, including all training in industrial art," and 30 "museums of art." Of these 37 schools, 24 were established in, or since 1869, and of the 30 museums 14 had like dates of foundation. These statistics

show the unusual activity then existing in the art development of the people, nor has this ceased ; new art institutions are being opened from time to time, either founded by liberal individuals, or by the community, and continual and important additions are constantly being made to the art collections of the several institutions.

The development of popular interest in the new features of education, from 1870 to the opening of the centennial in 1876, was very rapid, and its progress immediately following the centennial was surprising in its universality.

Up to the time of the centennial there were, in the United States, literally no books on artistic industries, and few on the fine arts, either published in this country or to be found in the ordinary public libraries.

In view of the present abundance here of this class of literature, native and foreign, this statement seems almost incredible ; it is, however, strictly accurate.

Save occasionally in three or four of the older cities, there was in the United States, during the first half of the 19th century, little public opportunity for seeing any works of art, so that, on the part of the people generally throughout the land, there was neither knowledge of, nor interest in, anything relating to art. The world exhibitions at the centennial first revealed to the great mass of American visitors the wonderful attractiveness and power of art, in creating and shaping the industries of the world. The wide-reaching influence of this world-view upon American educational and industrial development, thus effected by the centennial of 1876, can hardly be exaggerated. Its beneficent results were charmingly illustrated throughout the Columbian exposition in Chicago, in 1892-93.

In fact, the great eras of that triumphant progress of modern civilization which characterizes our present century, are marked by the splendid milestones of the "World's fair," beginning with the one set up in London in 1851.

A "straw," showing the wide-spreading interest in all matters relating to art, now existing in this country, in marked

contrast with the absence of such interest before 1870, may be seen in the fact that in 1899 a book is issued by "The Mac-Millan Company, publishers, New York and London," which gives for the United States and Canada similar information concerning art matters and artists to that which has long been given for Great Britain in their English issue, entitled "The Year's Art" — a directory of all art schools, museums, etc., etc.

The American volume¹ is a handsome well-printed book, illustrated with 52 full-page reproductions of the works of living artists. The varied contents of this work, when contrasted with the few pages of statistics in the circular of education of 1874, give more striking evidence of the general diffusion of knowledge of and interest in matters relating to art throughout the United States than could be given by many pages of mere description.

As the volumes of the special report, to be given to the history and present conditions of the schools and museums of the fine arts, though finished as to the early histories, are not yet completed; and, as there has not been opportunity to collect and compile the present statistics of these institutions in time to be available for this monograph, I have been glad to avail myself of the statistics gathered by Miss Levy, editor of the volume just referred to, showing, as they do, the continued growth and prosperity of the public art institutions. For the 30 "museums of art," as given in the art and industry report statistics for 1881-82, Miss Levy shows, as existing in 1898, 41 "art galleries," an increase of eleven, while for the 37 art schools of 1882 Miss Levy records 117. She also gives a total of 159 art societies in the United States and 9 in Canada. No such societies were recorded in the special report. Reference to the U. S. bureau statistics, as given in the preceding pages, show a notable increase in art collections and schools from 1869 to 1882. The statistics, as now given by Miss Levy for 1898, show

¹American Art Annual, 1898. Florence N. Levy, editor, New York. The Mac-Millan Company, 1899, pp. 540. Price \$3.

most emphatically that the interest in art education and in public collections of the fine arts, as contrasted with that shown by the earlier statistics, is still a growing and continuing interest. The good seed planted in Boston in 1870 has brought an abundant harvest !

III. THE MOVEMENT FOR MANUAL TRAINING

This movement which was so suddenly developed had its immediate origin in the demonstration given by the successful introduction of the new study of drawing in the public schools, showing conclusively that it was feasible to teach at one time, a single subject to a large number of pupils.

The following immediate paragraphs are taken from the opening pages of the introduction to "Part I of the art and industry report" published in 1885, by the present writer, in which the history of the introduction of industrial drawing in the educational systems of the country is given in detail.

One of the most striking and significant results of the experiment, begun in Boston in 1870, by the teaching of industrial drawing to the public school children of that city, has been the widespread interest awakened throughout the United States in the further development of the industrial training of children. No sooner was it shown that it was possible to give to the children in the public schools, some elementary training of the hands and eyes, than a movement began in many places, to teach actual trades and handicrafts to the children while in school.

Though there might be danger that overzealous promoters of this so-called "practical education" would in their earnestness, overstep the true province of education, overstrain childish muscles, and overtax the mental as well as bodily strength of the growing children, still the public good sense may be trusted to restrain and modify such extremes ; while the intellectual activity, which has been aroused and stimulated by this new departure in education, if wisely directed into practicable channels, can hardly fail of accomplishing desirable results.

KINDERGARTENS AND OBJECT TEACHING IN PUBLIC SCHOOLS

The substitution of a knowledge of the thing, in place of a verbal account of the thing, which is characteristic of the kindergarten methods, has begun to be introduced in the schools and mechanic's classes of England, and, also, so notably here in the schools of Quincy, Massachusetts, that it now goes in the United States by the name of the "Quincy method." * * *

"Object teaching" so far as it tends to awaken the intellectual faculties of the child, and to encourage improved habits of study and observation is to be commended and fostered.

RESULTS OF THE INTRODUCTION OF DRAWING AS A PART OF ELEMENTARY EDUCATION

It is referred to here only as one evidence of the rapid progress of the "evolution" of the principle embodied in the introduction of industrial drawing into the elementary public schools of the country. The practical bearing of this study upon the industries of the country, is shown in the tendency to begin the technical training of the future workman or workwoman, at a far earlier age than had been before thought practicable. The danger, as already suggested, lies in not recognizing the limitations set by nature. While the kindergarten method avails itself of the natural curiosity and wonderful activity of very young children, and in its educational processes closely follows the leadings of nature; the attempt to teach handicrafts to young boys may very easily go contrary to nature, by imposing tasks unfit for untrained minds and undeveloped muscles. No such objection can, however, lie against the study of industrial drawing. Weak indeed must be the hand that cannot lift a pencil, weaker the mind that, beginning at the beginning, cannot follow the graded and orderly steps, by which Walter Smith, basing his teaching on the everlasting truths of geometry, has arranged his progressive studies.

RESULTS TO BE ANTICIPATED FROM GENERAL INTRODUCTION OF
DRAWING IN SCHOOLS

When the study of drawing is regarded in all public schools as of the same importance as the study of reading and spelling, and as much time in the week is given to teaching drawing, as is given to either of these studies—which has nowhere yet been done, for even in Boston this study has been admitted largely on “sufferance”—then, judging from the results already secured, it is reasonable to anticipate an increase in the numbers, as well as superior expertness in the skill of American-born workmen. It is by reason of its direct bearing upon the development of skilled labor that this subject of the introduction of the study of elementary drawing based on geometry, and with a direct view to its application to industries, is of the national and general importance which seems to justify the preparation and publication of the present report. Accounts of the experiments in introducing “manual training” in the public schools, as well as the reports of the special schools for such training and of the technical industrial schools, will be found in their appropriate connection in Part II of this report.

THE LAND GRANT ACT OF 1862 THE RECOGNITION BY CONGRESS OF
THE ADVENT OF SCIENCE AS A FACTOR OF EDUCATION

The passage by congress of the law establishing the “colleges of agriculture and the mechanic arts” as long ago as 1862, is proof that the need of some form of educational training, other than the purely literary courses which then comprised all that was given in the higher schools and colleges, was widely recognized. * * *

DRAWING A REQUISITE PREPARATORY STUDY FOR ALL SCHOOLS OF
SCIENCE

A knowledge of drawing is so essential to any progress in many of the studies comprised in the regular courses of the schools of science that, in view of the almost total neglect at that time of this study in the public, or private

elementary schools, it is little wonder that when the new colleges, created by the national land grant act, were first opened, there were frequent complaints that, for want of this indispensable preliminary training in the element of drawing, nearly a year's time was lost in teaching the pupils that which should have been taught in the primary schools. While there were doubtless other studies in which a lack of suitable training was observed, drawing was both the most important of these preliminary studies, and the one in which deficiency was most common and most disastrous.

It is because this knowledge is indispensable as a preparation for the courses in the schools of science, that the teaching of the study of drawing in all the public schools of the country is of importance to the colleges created by the national land grant of 1862 ; and it is in this connection that one element of the practical value and importance of this training of the public school children in elementary drawing can be readily seen.

THE COMMON SCHOOLS ARE THE PREPARATORY ACADEMIES FOR THE AGRICULTURAL COLLEGES

The public schools are the academies that fit the students for the national agricultural colleges, and, therefore, it is of importance to these colleges that the studies taught in the public schools shall be such as are preparatory to their own courses of study.

* * * * *

UNIVERSAL TEACHING OF ELEMENTARY DRAWING ESSENTIAL

The fundamental idea of the present report is, that universal teaching in all public schools of the elements of "industrial drawing"—meaning by that an orderly progressive course of drawing based on geometry—has become an essential part of any general system of the public education of a people, and is equally necessary, whether the after-training of the child is to be that of an artisan, an artist, or a citizen engaged in any productive pursuit, or whether the

child is to be so situated as to be removed from the ranks of producers to those of consumers.

NATURAL DIVISIONS OF SUBJECT—INFLUENCE OF THE ART
KNOWLEDGE OF A PEOPLE UPON THEIR ART INDUSTRIES

The subject naturally separates into two main divisions; on the one hand, that embracing all matters relating to the technical industrial producing arts and artistic industries; on the other, those relating mostly to the fine arts; this last division properly includes three distinct subdivisions, relating, separately, to the theory and history, to the study and practice, and to the enjoyment and patronage of art. The first of these minor divisions includes such a knowledge of the historical development of art as must hereafter be implied in the term "liberal education," such as, within the past few years, has been taught in some of the classical colleges and universities; the second includes the special art schools and academies for the technical training of artists, architects, sculptors, painters and engravers, preparatory to the actual production of works of high art; the third comprises the various means of promoting that general information and art culture of the public, which is derived largely from the opportunities of seeing choice works of art in the collections of art museums and art loan exhibitions; the latter, having, perhaps, as important, if not as manifest, an influence upon the development of the industries and arts of a people as the former; for the industries and arts of a people are determined by their needs, their desires, and their intelligence.

So long as individuals and communities have never seen the added attractions given to buildings, furniture, clothing and household implements, by the application of art to such articles of prime necessity, so long there is no demand for the production of similar artistic articles; but let once their eyes be opened by a sight of the wonders of a "world's fair," or an "art loan collection," and immediately the demand is created. There is at first no ability, owing to lack of knowl-

edge and skill on the part of the home workmen to produce similar articles, consequently this demand must be met by importation. An increase of imports with no corresponding increase of exports is an evident disadvantage for the importing country. It is, therefore, of importance to any community or country to ascertain by what methods other countries have trained skilled artists and artificers, in order to adopt similar means; hence, an account of the experiments, expenditures and systems adopted by foreign countries, for these purposes, is directly demanded in such a report as this.

The origin of the educational form of manual training, as introduced in the public schools of the United States, and as presented in the technical manual training schools, is by some definitely assigned to the year 1876 as being the direct outcome of the object lessons of the "work in metals," shown by the Strogonoff school in the Russian exhibition at the centennial. The work of this Russian school was enthusiastically set forth to educators by Professor Runkle, of the Boston institute of technology, and by Professor Woodward, since director of the manual training school of St. Louis. Several other educators, interested in industrial education, as shown in the exposition, by the work in wood in the Swedish department, and by other like experiments, heartily favored the movement.

THE NEW DEPARTURE IN EDUCATION IN PUBLIC SCHOOLS. THE INDUSTRIAL PHASE OF THE MOVEMENT

This movement is, in the opinion of the writer, as stated in the opening sentences of Part I of the art and industry report, simply the logical outcome of the experiment of introducing instruction in industrial art drawing in the public schools, initiated by the calling of Walter Smith to Massachusetts in 1870. It is, therefore, germane to the purpose of the report, although not solely artistic in its present development. * * *

As this is a new departure in educational methods, it has seemed desirable to show the growth and changes of opin-

ions, for the movement is necessarily based upon the perception, by the educators and the public, of the desirableness of some changes in methods, while the nature, extent, and manner of the changes are all in question and proper subjects of discussion. So, that it seems desirable that the various steps by which conclusions have been arrived at in such communities as have taken some decided action, should be given at length, for the information of others contemplating action in similar directions. For this reason public official reports, as well as direct communications made to this bureau, are freely quoted at length in the appendices. It is hoped that sufficient material for tracing historically the inception and progress of this important educational movement in the United States will there be found, as well as an adequate showing of the arguments used by both parties to the discussion. Fullness and accuracy, rather than brevity, have been sought in the compilation from the various authorities there given.

It has been said, by one experienced in observing the results of legislation, that the unforeseen, indirect and far-reaching influence of any law was much greater, and often far other, than the intentional results sought by its enactment. Perhaps the recent "interstate commerce" law may be instanced as in point. However this may be as applied to man's enactments, it is unquestionably true in relation to the results of his discoveries in the realms of nature, when he has once set his new-found servitors to work! Who, for instance, could have foreseen that Galvani, experimenting with the legs of frogs in his laboratory in Italy; Watt, dreamily watching the tea kettle by the cottage hearth in England; Franklin, kite-flying in the Philadelphia fields; Fulton, whittling out the model of the strange, sailless craft he was to launch on the Hudson; or Morse, stringing wires around the walls of his studio in New York, were, each and all of them, more busy with that which would affect for ages all the after development of civilization; and influence the lives of men and the destinies of nations to a far greater

extent than did the decisive defeat and victory of Waterloo? Yet the discovery and utilization of the powers of steam and of electricity have not only revolutionized the world of matter, but of ideas!

ADVENT OF THE INDUSTRIAL ERA

The era of industrial democracy was made possible by these modest, patient students of nature. As soon as the advance in material development due to their discoveries began to be realized, the male inhabitants, either of kingdoms or republics, who had hitherto been regarded only as possible soldiers, began to be respected as producers—active factors in the production of the resources of wealth and power of the country. The new contests between countries gradually became contests between the art, skill and industry of their respective peoples. Not that wars have ceased, or that arms are laid aside, but that the arts of industry, the avocations of peace, begin to be recognized as legitimate fields in which the interests of nations are to be contested. The rulers are alert to impress all discoveries in the arts into the service of war, and are prompt in utilizing all inventions in the industries for warlike preparations. Nevertheless, it grows more and more apparent that the skilled artisan is rising in the scale of importance, while the warrior is valued more and more because he may be the protector of the workman, and of the precious things his art has produced. The world's fairs are recognized as the arenas in which the most brilliant triumphs of nations are to be won. The moment that it was seen that commercial supremacy was based upon industrial superiority, the new era was inaugurated. This was first clearly seen at the first great "world's fair," which was held in Hyde Park in 1851. National efforts to promote technical industrial education on a large scale date from that event. The rise of the mediæval renaissance does not more clearly date from the discovery of the classic manuscripts than does this modern era of the European renaissance of artistic industries from this great

fair. The traditions of art industries had, it is true, never been wholly lost in France, but the beginning of that general movement, which embraces all the European states, which led Russia to recreate Byzantine art, and England to discover new regions of art, and which has begun to be felt even in these United States, can be definitely traced to that time of the uplifting of the strange, gleaming, crystal dome above the elms of the London park.

DRAWING IN AMERICAN SCHOOLS

The beginning of the modern art educational movement in the United States can be as definitely assigned to the year 1870.

By a melancholy coincidence which groups the termination of the lives of the three remarkable men by whom this great educational reformation was begun, within a few short months of each other, the close of the first period of this movement, destined to exert immeasurable influence over the future of America, can be fixed as in 1886.

In common with Dr. Philbrick and Mr. Perkins, Professor Smith regarded the introduction of industrial art drawing in the schools as but the beginning of the movement for the industrial art education of the American people, as his published addresses testify.

The great movement in the United States which these three men definitely organized, and of the development of which they had a far-sighted, comprehensive view, may be said to have already fairly entered upon the second period of its development, no longer by any means confined to the public schools.

THE RELATION OF DRAWING TO THE PRESENT MOVEMENT

It is because all training in industrial education that can be given in the public schools as they now exist, or in any new class of schools that may be established with that direct purpose, must, of necessity, be based on the thorough grounding of the pupils in the knowledge and practice of

elementary industrial art drawing, of like character with that first successfully taught in the public schools of Massachusetts under the directorship of Professor Walter Smith, that the present widespread movement is termed a second step in the new educational advance. * * *

What these three men in Massachusetts did was to demonstrate beyond cavil, that it is as possible in the same time to teach a subject, by means of drawings and objects shown and explained by a teacher to a class, to many pupils simultaneously, as it is to teach the same thing to a single pupil. The effect of this discovery was at once to multiply indefinitely the power and capacity of the public school. For not only was this true of instruction in drawing and in writing, the studies which before had been thought to need particular devotion of the teacher to the individual pupil but it was found applicable to many other studies and to afford great facilities to teachers in illustrating many topics.

If industrial art drawing had no other value than to have furnished this proof of the facility of general instruction to classes, instead of to individual pupils, it would have fully justified all the cost of its introduction in the schools in money, time and effort. Much besides this was effected by the proof that the study of industrial art drawing demanded no special faculty on the part of either pupil or teacher, but could be taught to all by the regular teachers of the schools after a little preliminary training of the teachers themselves in classes. It was long before the popular impression that drawing merely meant picture-making, and that the ability to draw was a special gift of genius, could be corrected; but this was gradually effected by repeated public exhibitions of the work done by all the pupils of a school, or of all the schools of a town or city, where it was shown that every child whose eyes and fingers were uninjured could learn to draw. The object of the study, which was to train the eye and the hand—the one to accuracy of seeing, the other to facility of execution and exactness of statement—began slowly to be understood.

The value of a thorough training in industrial art drawing has at last become so generally recognized as to call for little argument. It is taken for granted in the discussions about the further development of industrial education that the pupils have been taught the elements of drawing, just as, in discussions about new text-books, their ability to read is assumed. It was far otherwise in the beginning. All through the early years of the decade, from 1870 to 1880, there were very few individuals, and fewer school officials in cities and towns, who were in the least aware of the usefulness of this study. The very places in which the most zealous advocacy for manual training in schools, and for the adoption of all forms of industrial education is now found, were only, after long-continued efforts, led to allow the experiment of teaching drawing in their public schools to be tried. However, the centennial exhibition in Philadelphia, in 1876, worked wonders in the general diffusion of a knowledge of the possible value of this industrial art education; for the American people then first saw into how large a share of the manufactures and arts of mankind this application of art to material enters; first learned how values were enhanced by art, and began to realize how art ennobles labor.

They saw, also, at Philadelphia, in the collections shown there of the industrial art drawings made by the school children of Massachusetts, by what methods, and with what results, the teaching of this new study could be effected. More than this, the pupils' work in applied mechanics, shown by the Russian schools, illustrating the results of giving definite instruction, in a systematic course, to artisans, was there first seen, and the idea of the "manual training school," since so admirably exemplified in the St. Louis and the Boston schools, modelled after the Russian plan, was familiarized to American educators. Thus, the sure foundation for a further advance in the development of industrial education was laid.

As soon as the success of this attempt to begin the elementary training of the eye and hand in the public schools

was satisfactorily established, it was evident that a new and valuable means of education had come into use. Educators eagerly adopted and experimented with the new methods, some looking at them only with a view to their application in the art of teaching, their pedagogic value; others, the majority, seeing in them the means of giving a more directly practical turn to the training in the public schools. The demand for this more practical education has been rapidly growing, and in these new studies were found the first practical suggestions for so modifying the old methods of school education as to adapt them to the new demands. In common with all germinal ideas, they were found capable of various applications and of indefinite development. It was the recognition of this potentiality that led Dr. Philbrick and Mr. Perkins to desire and secure their introduction.

When it is seen how truly the present interest in industrial training is the legitimate result of the introduction of industrial art drawing in the public schools of Massachusetts, and that, but for this pioneer work in thus clearing the way, and laying the sure beginnings of general technical training in this country, the great Philadelphia exhibition must have failed of any direct practical bearing upon our education, or our industries, other than to greatly stimulate the buying of foreign art manufactures; the magnitude of the services rendered to the whole country by the three men who originated the plan, and effected the introduction of the practical study of industrial art drawing in the common schools of Massachusetts in 1870, begins to assume larger and grander proportions.

That the practical value to the people of the United States of the opportunities afforded by the splendid displays of their art industries by the nations of the world at Philadelphia, was greatly enhanced owing to the direct interest in industrial art training, begun in Boston six years before and rapidly developing in Cincinnati, St. Louis, and elsewhere, may safely be assumed; because the industrial value to a people of the sight of such varied museum collections as

were shown at the centennial, is not mainly derived from the pleasure given to the mere sight-seer, but is owing to the opportunities thus afforded to practical designers and artificers for thorough study of the works shown ; for, as Emerson sagely says, " No matter how much facility of idle seeing a man has, the step from knowing to doing is rarely taken." It was in this exhibition that the utility of such training in the artistic industries was first made known to large numbers of Americans ; it was here, also, that the methods of successful teaching in the elements of these arts were first shown to the whole country. It is of interest thus to be able, sometimes, as in this instance, to trace great results to their causes.

This movement was the true dawn of the new era of the industrial art development of America, which was apparently ushered in by the centennial exhibition ; nor, if the movement, which has gone steadily forward from those early days in Boston, meets with no unforeseen interruption, will the term "era" seem inappropriate.

That the purpose of the early promoters of the introduction of the teaching of drawing in the public schools of the country, was to develop and promote the knowledge and love of art throughout the community may be inferred from the fact that, in the same year that Walter Smith, himself a sculptor by profession, was brought to Boston, Mr. Charles C. Perkins,—at whose suggestion some two years before, the American social science association had sent to Europe for a number of casts of classical statues and busts to be placed in the new building of "The Newton street girls' high school,"—superintended the placing of these works of high art in position ; the architect having provided for them in his plans. The purpose of this collection was twofold, both to provide fitting decoration for the building, and, "as a simple but efficient means of introducing an æsthetic element into the educational system of the United States," by offering to the pupils, an opportunity to see and comprehend, some of the works of the great masters of art. With

this intent Mr. Perkins, himself an acknowledged authority on all matters relating to this subject, gave to the fortunate pupils of that school, a series of lectures on classic art as exemplified by the works before them. This collection comprised casts of ten famous antique statues and eleven busts. In addition to these single examples a portion of the wonderful frieze by Phidias, from the Parthenon, was put in place on the walls.

The Museum of fine arts, though incorporated in this year of 1870, was not opened for several years; so that the casts of the girls' high school collection comprised the most of the works of classic art then accessible to the public in the city.

This, then, seems to have been the first instance in this country of the definite undertaking of the artistic adornment of the interior of school buildings, though for many a year, here and there, in some wayside country schoolhouse, a few wild flowers, or garden posies, brought by loving scholar to the youthful teacher, and set in honor upon her desk for all to see, had given unwonted charm and color to the dingy room, with unconscious suggestion of the beauty waiting to transform, at a touch of the magic wand of art, those too often repellant dens of ugliness, the common school rooms of the country, with their desolate, naked walls, into bright attractive homes for the happy children; such as are to be found to-day in city and town, and along country hillside, all over the land.

As the origin of the present somewhat widely extended movement for beautifying the school rooms, has been attributed solely to the movements begun in France and in England, a decade later (see report of Boston school committee on drawing and music for 1883) — it has seemed well to refer here to the inauguration in 1870, of this earlier Boston idea of placing examples of antique art in the school. For a full account of this Boston experiment, and of other later similar efforts elsewhere, as well as for several papers of interest in this connection, see chapter I of part II, "Art

and industry report," pages 1-11, and Appendix "K," part II, pages 709-731.

Mr. Perkins, and his associates, sought to give to the young girls, many of them about to become teachers in their turn, some definite knowledge of classic art, so that not only should they see for themselves these objects of ideal beauty, but that all literature should be thus for them illumined — since the literature both of Europe and America, springs so largely from that of Greece and Rome. Of course the cost of such a collection of casts of ancient art, would preclude any such undertaking in most schools, public or private, but, fortunately, beauty is not to be held a captive, even in golden chains, and, just as the cheaper plaster casts, as in this instance, take the place of costly marbles and bronzes, so engravings and photographs, afford admirable and inexpensive reproductions of plastic and pictorial art; while in our large cities are now publishers who make a specialty of providing such artistic illustrations, for the use of students, or for the adornment of the study walls, and the halls and assembly rooms, of the schools; adapted to all needs and to all purses. However, unless the living teacher shall bid these dry bones of art to live, shall unseal the closed eyes of the children so that they can recognize their beauty, and shall awaken their eager curiosity to learn the meaning and the message of these silent ministers of art, they will fail of their mission.

The initial movement in Boston, in 1870, for artistic adornment of school rooms, as well as for the art instruction of pupils, was soon followed by similar undertakings in some of the neighboring towns and cities of Massachusetts; and, later, when the English and French movements became generally known, in many places all over the country.

In New York, Brooklyn, Providence, New Haven, Philadelphia, Chicago, Milwaukee, Denver, San Francisco, and doubtless in many other cities, the movement has made good progress. Long since, in Baltimore, in the Maryland normal school building, under Superintendent Newell, and

in Washington, D. C., in the Franklin school building and the high school building, under Superintendent Wilson, many artistic works had been placed in the halls and school rooms, which are constantly added to, under the supervision of their successors. In Boston, in November, 1894, there was held under the auspices of "The public school art league" "The New England conferences of educational workers" and "The Boston art students' association," a fine exhibition of works suitable for school-house decoration, and in Brooklyn, New York, in the spring of 1896, a similar exhibition in charge of the art education section of "The Brooklyn institute of arts and sciences."

This direct outcome of the movement for industrial art training in all public schools, and inspired by the same leaders, may serve to show that the art idea was ever in the plan of the founders of this important movement, which, unfortunately for awhile, was in great danger of being wholly divorced from any idea of art.

The Boston movement for putting the study of drawing into the regular curriculum of the public schools, attracted the attention of educators all over the country, and during his first year in Boston, Professor Smith was invited to attend the convention of state school superintendents held in Washington, to explain the nature and purpose of the innovation of which he was in charge. The strong personality of the man impressed all who listened to his impassioned pleadings and aroused a contagious enthusiasm, so that even before the showing of results at the centennial in 1876, the fundamental principles of the movement were well known throughout the educational centers of the public school systems of the several states of the union.

THE CULTURE OF THE ÆSTHETIC FACULTIES FORMS NO FEATURE IN MOST OF THE MANUAL TRAINING SCHOOL COURSES

This failure of the art idea in the manual training schools is so evident that some of those who started enthusiastically with the industrial art drawing movement, but were led away

by the more sudden popularity of the industrial training movement to the hearty indorsement and support of the latter, begin to realize the evil they have helped to bring upon the most hopeful educational movement ever begun in these United States, and feebly point to a single manual training school in which — thanks to the fact that the superintendent of that city was once thoroughly in touch with Walter Smith, and had mastered the underlying principles of art training which inspired the teachings of that great master — some reachings out for æsthetic culture are indicated, as the ground for their hope that in the future, art training in manual training schools “must come as a necessity!” So, for ages, men have pointed forward to some anticipated millenium!

Neither in the theories, wishes or methods of the people who most actively advocate the manual training movement can the present writer see promise of any valuable development or training of the æsthetic nature of the public school children of the United States.

“The ‘industrial training’ and ‘manual training school’ advocates are entitled to much credit for what they have accomplished, and there is much of value in the work they seek to do; but there is no evidence that they comprehend, or desire, any such art training as Messrs. Philbrick, Perkins, Smith, and their wise and enthusiastic coadjutors, hoped to add to the educational forces of America.” * * *

“Had these three men been spared to instruct and to inspire, it seems possible that the hopes they aroused might have met fruition.” * * *

“The prolonged study of these schools, as well as of the arguments of manual training advocates, incident to the preparation of this volume, has led to the reluctant conclusion that, however desirable the development of art among the American people may be, no such development is directly, or indirectly, to be anticipated from the efforts of the advocates of industrial education; while the methods of the manual training schools are, of necessity, mostly occupied

with the kind of drawing specially adapted to mechanical processes."

"It is to be remembered that Professor Woodward, the foremost advocate of the manual training school, has never made any claim for it on the ground that it was an art training school. He bases the claims of this class of schools on far other grounds. It is rather to those who began as advocates of 'industrial art training,' and who, perhaps, finding 'industrial training' more immediately popular, and seeing that it was the outcome of the first movement, hoped to blend the two, that any artistic claim for the latter movement is to be attributed."

"In the early chapters of the present volume it was argued that the two ideals and methods were by no means incompatible, nor is there any insurmountable reason why they should be; but it remains that, almost without exception, the training in these schools under the influence of the industrial education ideals, is away from art, and more and more towards mechanics; while the advocates seem long since to have forgotten that there was ever any idea of introducing any art training in the public schools,—the drawing they would have taught is practical, mechanical. All this is good, excellent for the purpose sought, but it is *not*, and has nothing to do with, 'industrial' or any other 'art.'"

THE SCOPE OF THE INDUSTRIAL EDUCATION MOVEMENT

The industrial education movement is far more wide embracing in its scope, than would be implied by the present prominence of the manual training school feature; it includes the girls, as well as the boys; it considers the needs of children in the remote country schools, no less than the wants of those in the crowded cities; it is busy with the problem of a logical system of training, beginning with the kindergarten and ending only with the high schools. It is a vital movement full of interest and of enthusiasm, and has drawn to its support wide-awake educators all over the land. It has also aroused great interest on the part of

the public, and some outspoken advocates, inexperienced in the practical work of education, have in their enthusiasm, made many statements in regard to existing methods of education which are fairly open to criticism.

As stated, the general awakening of interest in the educational industrial possibilities caused by the rapid extension of the movement for the adoption of drawing as one of the required studies in all public elementary schools, had a marked tendency to eliminate the art idea. So little was the knowledge of, or interest in, art in any community, that the first advocates of drawing, though, as has here been clearly indicated, they valued the study chiefly for its relation to the arts, spoke to the public mostly of the industrial value of drawing, seeking thereby to recommend the new study.

The enthusiastic efforts of the advocates of drawing, the remarkable personal influence of Professor Walter Smith, the showing made at the centennial exposition of the successful work of the students of the Boston normal art school, and of the work of the Boston school children, gave a great impetus to the development and spread of the industrial art movement throughout the country, so that it seemed to be on the point of complete success, and of being adopted in all the public schools of the states. Suddenly, however, a change came. After twelve years of devotion to his important work of supervision, Mr. Smith resigned as art director of the state, as principal of the normal art school, and as in charge of the art training of the Boston public schools, and returned to England.

The marked change that followed in the direction of the educational movement from industrial art training to manual training and the teaching of trades, was doubtless due somewhat to the general indifference to art felt by a large part of the public; but, more largely, to the failure of intelligent support of the art ideal, due in part, as suggested, to the return of Walter Smith to England — driven out by antagonisms, but in a greater degree to the almost simultaneous removal by death of the able early promoters of an art pur-

pose in the study. To the concurrence of these lamentable events may fairly be attributed the almost total eclipse of any art idea in the study of drawing which for a time prevailed.

At this period the purpose which inspired the early promoters of the new study of drawing seemed hopelessly lost in the new-born zeal for mechanical drawing as relating only to "manual training"—to making things; and to the preposterous, though popular, idea of graduating from the public schools boys of fourteen and eighteen years of age as thoroughly-trained expert mechanics!

The simplest principles of educational and technical industrial standards are alike violated by such claims and endeavors.

Since statistics show that the vast majority of children in the United States remain in the public schools only five years—the period varying somewhere between the ages of five and of twenty years—no argument seems called for to demonstrate that the skill requisite for a competent, self-supporting mechanic can hardly be acquired during those few years of youthful, immature development.

The not uncommon exhibition of steam engines and other complex machines, as having been designed and built in the school, by boys of only fifteen or eighteen years of age, needs no comment.

The claim that the simple mechanical processes can be taught; some knowledge of the use of tools acquired, and much given that will serve to prepare the boy for the subsequent technical training which is essential to his success, but suitable only to one of added years and maturer physical development, is perfectly tenable; so that manual training, as elementary preparation for the technical study of future life-work, or, as giving some desirable general knowledge of mechanics, is to be warmly commended and encouraged, but it is not to be taught as antagonistic to the elementary instruction in drawing, the alphabet of art as well as of mechanics.

It is an evidence of the common sense of the community that such waves of feverish interest in educational experi-

ments are but of short duration. Inevitably somewhat later the new study, which at first was to revolutionize all former educational theories and methods, gravitates to its proper place in the general scheme of education, according to its proved relative importance. This was strikingly illustrated a few years since, in the schedule of studies in the Massachusetts institute of technology. When manual training was there first introduced a large workshop in a separate building was given to it, and pages in the catalogue were devoted to the outline courses of the new study, but, in a year or two, the grand common sense of General Francis A. Walker, while retaining it in the institute, had quietly relegated it alike in building and catalogue, to its rightful position as a subordinate feature among the varied courses taught in that practical university.

So, within the past few years, a similar reaction has come in connection with the public schools, and the art quality of drawing is again recognized.

It is to be hoped that the essential difference between the educational value of a study as a method of developing and stimulating the intellect, and that simple iteration of thought and movement, essential to the production of technical facility in mechanical operations, will not again be lost sight of by the educators or the public.

OFFICIAL STATISTICS SHOWING THE GROWTH AND PRESENT CONDITION OF MANUAL TRAINING IN THE UNITED STATES

In the statistical tables of the annual reports of the commissioner of education, the facts in relation to the various public schools, and educational institutions of the country, are carefully tabulated; and occasionally, at intervals of several years, full chapters of the report are given to the consideration of one or more of the several classes of educational institutions.

In the annual report for 1893-94, issued in 1896, were published full tables of statistics of manual and industrial training in city public schools, and other educational institutions, in the United States.

These comprised full details of courses given in the public schools of ninety-five towns and cities; in forty-nine institutions of collegiate grade; in nineteen normal schools, and in seventeen manual training schools. In addition, there were the industrial statistics of sixty-three colored schools; fifty-five schools for the deaf; twenty-six schools for the blind; nineteen for the feeble minded; fifty-three reform schools; eighteen charity schools; six trade schools, and twenty-seven United States Indian schools. This report also contains a most interesting chapter on "the rise and progress of manual training," by C. M. Woodward, director of the manual training school of Washington university, of St. Louis, Missouri. (Volume I, pages 877-949.)

In the annual report for 1895-96, issued in 1897, were published several chapters relating to "industrial" and "industrial art" training. Chapter xvi, relating to "typical institutions offering manual or industrial training," (see vol. II, pages 1001-1152), treats of city public schools in eighteen leading cities; manual training schools in five cities; trade schools, six; normal schools, five; schools for defective classes, eight; schools for colored pupils, five; miscellaneous institutions, many of them endowed, sixteen. These represent all varieties of typical training schools, and of schools in which industrial training is an important feature.

In the annual report for 1896-97, issued in 1898, Statistics of schools for manual and industrial training (vol. 2, pp. 2279-2294) are given for public schools in ninety-nine cities, and in 359 institutions, other than city schools. There are sixty-six manual training schools and twenty-four industrial schools for Indian children.

In the annual report for 1897-98, issued in 1899, chapter xlviii, volume 2, is given to detailed statistics of manual and industrial training. References are given to similar statistics in the several annual reports from 1888-89.

Statistics for 1897-98 are given for 114 manual training schools, an increase of 15 over the preceding year. Of these, 24 are industrial schools for Indian children.

No attempt was made to collect statistics of manual training given in other schools. Such statistics were given in the report for 1893-94.

The following statistics show the steady growth of this training in public schools: In 1890, reports were given of 37 cities; in 1894, of 93 cities; in 1896, of 121 cities, and in 1898 there were 146 cities in the schools of which manual training was taught.

A BRIEF SUMMARY OF THE INTENT OF THE VOLUMES ALREADY
ISSUED OF THE ART AND INDUSTRY REPORT

As reference has been freely made to the "special report on art and industry," issued by congress, and the United States bureau of education, I briefly recapitulate here the main divisions of the three first volumes, before coming to the general consideration of the present condition of the country, both in its art development and in its facilities for education in art, and in the technical application both of art and of science to industry, which precedes the main body of part IV, the final volume of the report yet issued.

The first two volumes of this report dealt mostly with the elementary public schools — these last two with the artistic and industrial training in other schools, and classes, for older pupils, and are given more directly to the methods of industrial training, though, in each volume, the art ideal, which inspired the Boston promoters of the new education, is ever kept in view, and it is to be hoped may not seem to have been neglected. This was the absolutely new element added to our American methods of public education, an element to us of priceless value. The universal Yankee Nation had shown no inferiority in the application of mechanical invention to industry, and there seemed no especial need of increasing educational activity in that direction. "Necessity" had, early in New England, proved a prolific "mother of invention," and the increasing peoples in other parts of the land showed no falling off in mechanical ingenuity. It was far otherwise in all matters relating to the fine arts.

As the first volume of the art and industry report was given to an account of the introduction of drawing into the regular courses of study in the public schools, so the second volume was devoted to a similar account of the widespread movement for putting "manual training" and industrial education in its various forms in the public elementary schools.

The third volume was given to an account of the voluntary associations, by mechanics and others, in the several cities and towns, for mutual improvement by means of reading rooms, libraries, courses of lectures, etc., and which, also, in most instances, began with elementary common schools and, as rapidly as public free schools were established by the community, grew into special, technical trade schools, in some cases of a high technical or artistic character; as new educational demands, not as yet met by the public schools, were recognized. These furnish a most interesting class of schools, varying with the local needs of their communities, and are admirable examples of the practical working out of educational and industrial problems by a voluntary effort of self-help by independent citizens.

These were, in many places, eventually supplemented by the efforts of liberal individual citizens, who founded schools and institutions with similar purpose, namely, to give to youth, otherwise unable to secure them, educational facilities to fit them to become self-supporting citizens. This ever-growing throng of public benefactors, led by McDonough, Franklin and Girard, nigh a century ago, is one of the proudest glories of the American people. Space fails here to record the names already inscribed on this golden book of fame. Accounts of a number of these admirable institutions, mostly of superior technical character, are given in volume three.

In the fourth volume, the last of the series as yet issued, accounts are given of the typical manual training schools; of five leading technical mechanical schools; of some trade schools; of a most interesting educational experiment under-

taken by the Baltimore and Ohio railway under the auspices of President Robert Garrett, in 1885-87; and of the schools of science and engineering of the land grant colleges of agriculture and the mechanic arts. No attempt is made, however, to give a complete view of these latter institutions; the accounts of these colleges are limited to notices of those departments which give instruction in drawing and the industrial arts.¹

These two volumes thus continue the accounts of the development of industrial art education, begun in part I, by the history of the introduction of the study of drawing in the public schools and continued in part II, by accounts of the surprisingly rapid development of manual training, as a part of public school education in the United States. A phase of educational activity and enthusiasm which, for a season, seemed to threaten the extinction of any idea of artistic development; and to substitute for the æsthetic culture of the youthful mind, simply a certain amount of manual dexterity in the manipulation of mere mechanical movements, with a limited training in the elements of common industries. All of these practical bits of manual training are useful in their turn, but the sum of this training furnishes but a pitiful substitute, as an element of education, for that æsthetic industrial art training which those far-seeing educators, Walter Smith, John D. Philbrick, and Charles C. Perkins, so successfully began in Boston in 1870.

At that era it was evident to all intelligent observers that the one element absolutely lacking in all American education was the æsthetic. Art as an essential feature of education was unknown. It is true that the literary arts, poetry and oratory, received some little attention in the higher institutions, and that instruction in elementary music was not wholly neglected in the public schools; but, so far from any attempt to give even the most cursory knowledge of the graphic and plastic arts, being made generally in the higher educa-

¹ For current statistics of these colleges see latest annual reports issued by the United States commissioner of education.

tional institutions of the country, they were simply ignored, while æsthetics were only thought of as forming a subordinate branch of metaphysics.

This absence of any knowledge of, or training in, the fine arts, held true in all American public educational institutions, from the district school to the college. There were then no true universities, though several small but ambitious colleges were incumbered by the grandiose title.

While this statement as to the absence of any general opportunity for seeing examples of the fine arts, and as to the lack of any attempt to give a knowledge of the arts of painting and sculpture in the public schools and other public educational institutions in the United States is not exaggerated, it is nevertheless true that the fine arts were not wholly ignored in America, and that, as early as the latter part of the 18th century, the names of some few American artists were known to the world, while early in the present century efforts were made by a few people of culture to establish art centres in several of our cities. Facts relating to the early history of these sporadic efforts to form art academies and public art collections, have been most eagerly sought and collected for the present work. These interesting histories will be given in parts V and VI of this report. In view of the later developments, especially of the growing general interest in, and knowledge of, art matters since the beginning of the movement in Boston for teaching elementary drawing in the public schools, and the vastly greater impulse to public interest in everything pertaining to art, given in turn by the holding of the Centennial and the Columbian expositions, the story of these early efforts acquires added interest. To the self-denying efforts of a few artists and art enthusiasts, were suddenly added the enthusiasm and the active support of an awakened public.

In view of the many collections of casts of antique sculpture, and of the private and public art galleries, rich in examples of the work of the leading modern artists of Europe and America, which, as the result of this "awakening," are

to be found in the United States in the year 1898, and of the special art classes and art schools now in our cities, with the very general interest shown in the literature of the arts, and, further, in view of the present easy access by the public to the before-mentioned art collections, the statement concerning the scarcity in America, as recently as in 1870, of similar opportunities, would seem almost incredible. It is, nevertheless, the fact that, at that date, there were but four or five small collections of casts of classic sculpture in the whole country. Boston, New Haven, New York, Philadelphia and Washington, had each a few examples of such casts; but all the casts of sculpture then in the country, both in public and private possession, would not equal in numbers or value, the casts now possessed by the leading art museum in any one of these cities; while in towns, cities, and colleges, all over the land, are to be found valuable and interesting collections of casts and paintings.

Two statistical tables in part I of this report, show clearly the poverty of this nation in public art collections, and in opportunities for learning art, as recently as 1873.

There were then but eight colleges which gave any instruction whatever in art, or that had any collections of art works, while there were but five public art museums in the whole land. (See tables on pages 502-507; part I of this report.)

The Centennial exposition in Philadelphia, in 1876, was a revelation to the American people, not only of the glory of the graphic and plastic arts, as shown by the world's great living artists, sculptors and painters; but, also, of the variety and beauty imparted to articles of usefulness and ornament by the wonderfully artistic weavers, potters, and metal-workers of the Orient, and by the skilled art workers of Europe.

The impulse then given to public interest to art, in America, may perhaps be most readily realized by a glance at the table of statistics of institutions giving art instruction, and of the public art museums, existing in the United States in 1883, given in part I of this report. (See part I,

pages 385-411.) Thirty-seven institutions, which give some form of art instruction, and thirty museums of art, are recorded in these tables,—certainly a remarkable increase in the opportunities for art culture provided for the public to have been effected in the short time of ten years!

The increase of such opportunities since 1883, by the opening to the public of similar facilities for art culture, both by the founding of public art galleries, the making of private collections of art, and the general dissemination of information on all matters relating to the arts, by the press, and by lectures and addresses, have been no less remarkable, stimulated as all this interest has been by the holding of the exhibition in Chicago, in 1892-93; for, wonderful as were the revelations of the Centennial, to the public of 1876, the marvellous showing of the Columbian exhibition, or world's fair, at Chicago, in 1892-93, completely overshadowed them.

In this latter exhibition of the world's industries and arts, was shown not only the striking advances made since 1876, by all the world, in every field of human activity, knowledge and enterprise, in art and industry; but, also, more impressively if possible,—at any rate more significant educationally,—than these myriad treasures from all the earth, was the revelation of the marvellous beauty of that white city by the inland sea; with its classic peristyle, worthy of the Athens of Pericles and Phidias; its lofty pillared fronts and swelling domes—its vast palaces stretching in seeming endless procession. The beautiful transitory treasure houses America had built for the world's richest offerings! These stately structures—which filled every beholder with wonder and delight—proclaimed to the world that, in the intervening years following the Centennial, the young nation of the west had given birth to a race of great builders—architects, sculptors, painters and decorators, worthy to rank with the world's worthiest!

As the American architects had, as a body, early undertaken to secure thorough training in that art, for the young

men aspiring to enter their profession, this demonstration of the grand results of thorough artistic training in architecture and its kindred arts was in the nature of a triumphal verdict in favor of definite education — of special training — in art, as well as in science, or in the so-called “learned professions.”

Thus, while these temporary buildings by their variety, fitness and beauty of proportion, won the admiration of all beholders, they were, in fact, but a great object lesson, illustrating on a gigantic scale what education in architecture, art and artistic decoration could effect.

The noble building of the Boston public library, since erected, and the stately marble palace of the National library, so recently opened in Washington, are enduring monuments, showing what the art of American architects, builders, sculptors and painters can accomplish, in these closing years of the nineteenth century, in the construction and adornment of a great public library.

The exterior walls and sculptures of the National library, the interior halls and grand stairways, and, above all, the profusion, variety and general excellence of the sculptured and pictorial art works enriching walls and ceilings within, remind us that we are, even now, in this nineteenth century, living in the years of that “renaissance” which did not pass away, as we once thought, with the passing of Angelo, Raphael, De Vinci, and their peers, but which is still vital with inspiration, so that here, on this to them unknown continent, opportunities are beginning for the future art masters of the world. When Hunt painted his two great allegorical pictures on the walls of the legislative chamber in the state capitol at Albany, that great artist “builted better than he knew,” though, alas! his own works so quickly passes; for, by that single precedent, he opened up all wall spaces of public buildings to the future artists of America; so that hereafter, in this land, it shall be held — just as it was in Europe centuries ago — that the walls and ceilings of all palaces, churches, and other public buildings are to be considered but as the durable canvas of the painters.

That "rebirth" of the past, which came with the discovery of a few of the art wonders of Greece, occurring almost simultaneously with the regaining of some of the intellectual glories of Greece and Rome, in the unearthing of a few manuscripts which gave to us moderns a glimpse of their glorious intellectual triumphs — as yet unsurpassed and seemingly unsurpassable — gave to our conception of the capacity of the human intellect a new ideal, and woke the world to life !

What the wonders of the classic age, in art and literature, must have been, we can faintly imagine, contemplating the works of the intellectual and artistic giants of Italy in the middle ages, who sprang into being at the magic call of a few scattered fragments of the words and works of the mightier ancients ; just as, in Holy Writ, we are told, the chance touch of the bones of the prophet Elisha woke the dead to life !

So, to-day, as Homer, Aeschylus, Demosthenes, Aristotle and Plato, dominate the world of letters in poetry, eloquence and philosophy, Phidias, Ictinus, Appelles, and their compeers, lead the worshippers of art.

In art, in our own day, have been repeated similar discoveries to those which in literature, four centuries ago, aroused to new activities the mind of Europe ; for the revelations of Etruscan tombs, the patient explorations by Layard, Schliemann and Di Cesnola, the unearthing of the terra cotta figurines in Tanagra, the later work by English and American enthusiastic scholars in Greece, in these very days, have brought home to us moderns a comprehension of the vitality of classic art ; which, contrary to our earlier impressions, we now find to have been busied not only with the ideal images of the Olympian divinities, but also with the every-day life of the people, all testifying to the solidarity of the human race ; for, quickened by the life-giving touch of their artists in those far-off centuries, the little figurines of the graceful maidens of Tanagra, reveal, in their unconscious attitudes, the same love of dress, the same delight in free movement

and flowing robes, in short, the same irrepressible joy in life, and the same marvelous beauty of youth, which meets us to-day on every hand, a-foot or a-wheel, in the blushing maidens of 16 years in this fair land, the unknown "ultima thule" of the ancients! So past and present meet and blend, taking no thought of the thousand intervening years! Here to-day, the thought, the art, of Athens and Rome, shape our thoughts and arts; so that we, consciously or unconsciously, are the children of that elder civilization.

The most recent illustration of this influence of classic examples upon our modern American art ideals, to which reference has been made, occurs among the buildings of the exposition held in Nashville, Tennessee, in this summer of 1897, where the crowning architectural charm is found in the striking restoration of the Parthenon of Athens, which is the model taken for the art building of the exposition. This reproduction is spoken of as full of grandeur and beauty.

It is also remarked that the government building erected for showing the governmental exhibits, has, fortunately, been modelled after the Chicago exhibition art building; so that, instead of being externally, as was the one at Chicago, a hideous enormity, in contrast with the artistic buildings surrounding it, this copy in little, of the beautiful construction designed by Richard M. Hunt for the art building of Chicago, is not out of harmony even when brought into contrast with the world renowned *chef d'œuvre* of Ictinus and Phidias.

This is all the more to be rejoiced in, because it began to seem that, under the stress for room in our modern cities, all ideas of beauty in architecture must, perforce, be wholly subordinated to the frenzy of piling stories upon stories, till the builders seemed to have no ideal other than that of the Tower of Babel.

This epidemic of many storied buildings has had a most unfortunate effect, in many instances, in degrading the architectural aspect of our older cities. Perhaps some of the

most striking examples of this incidental evil, are to be found in the city of New York, where the ever beautiful old familiar landmark of Trinity church steeple has been eliminated from the once attractive view of the city as seen from the bay. In addition to this misfortune must be reckoned the recent belittling of that charming example of palace architecture, the New York city hall, formerly so well shown standing as it did in the ample open square given to it in the heart of the town, now, seeming as if at the bottom of some mountain valley, towered over by the clustering cliff-like business buildings that crowd about the square, shutting out all views save of their own precipitous walls.

In Washington, an impertinent modern apartment house, towering in apparent emulation of the Washington monument, obtrudes its awkward outlines and gigantic bulk in every possible view of the capital city, once so beautiful as seen from every point of vantage and uglifies it all.

In some, at least, of the cities of Europe, the observer can hardly fail to notice that, while the residences and business buildings in the streets of the city may make no pretence to any display of architecture — often being noticeable rather by reason of excessive plainness — care has been taken to secure for the public buildings of church or state — the cathedral and the civic palace — ample space, where no private erections could ever destroy the harmony of proportion, or impair the true architectural effect of the building.

In this country, notably in the very instance of the New York city hall, this effect was supposedly secured by the generation who built it only to be thrown away by a later generation of ignoble or careless successors.

In the situation of the capitol building of the United States in Washington, D. C., and in those of the state capitol buildings in Albany, New York; in Boston, Massachusetts; in Hartford, Connecticut; in Nashville, Tennessee, and in many another state capital, the sites are commanding,

It is to be hoped that in the choice of the situation of the new buildings of Columbia college and the new cathedral

on Morningside heights, New York city, the relative position of those several buildings have been so chosen as to be architecturally isolated, so that no such misfortunes can affect them, as have recently relegated Trinity church and the city hall to comparative obscurity.

If, hereafter, American towns and cities, take pains to secure ample room and effective positions for their chief architectural buildings, the lesson to be learned from the humiliating experience architecturally, of New York city, may not be without compensation.

In a republic, it seems eminently fitting that the powerful effects of great architecture should be reserved for the public buildings of church and state, rather than be lavished on the comparatively humble dwellings of private citizens, however wealthy, or personally powerful, they may chance to be; for the individual passes, but the state remains.

In a country like ours, where, fortunately, there is no hereditary class, it is absolutely wasteful for any private citizens to build palaces for their residences, only to leave them to be enjoyed by strangers, as has been, and seemingly must continue to be, the history of many of the costly private dwellings built by ostentatious millionaires in the United States, during the past few decades.

It is well that this should be so. Great art is for all the people, and can no more be limited to a few, than can the blessed sunlight; which floods alike the hut of the hind and the palace of the noble.

The present volume of this report, as well as the one immediately preceding, is mainly given rather to a consideration of the opportunities afforded in these United States, for acquiring technical industrial and scientific training, than to the facilities for acquiring knowledge of, and skill in, the so-called fine arts; though, in view of the intimate connection which exists between the industrial and fine arts, and of the fact that much of the elementary training is essentially the same in both, the consideration of either is in place in each and every volume of this report; though the given

volume may be mostly occupied with the other. It is with this thought that the foregoing pages have been given to the brief summary of the recent remarkable development of the fine and decorative arts, in connection with the forward movement in the architecture of public buildings, so strikingly illustrated in the recently erected library buildings, in Boston and Washington. The just completed building of the Chicago public library, though on a smaller scale than the others, and, in further contrast, making larger use of merely decorative marbles in wall surfaces than of the work of the artist painters, is, nevertheless, unmistakably of the renaissance period.

The wonderful wealth in decorative carvings and grandiose stairways, in the as yet uncompleted state capitol at Albany, suggests some of the undesirable features of the later renaissance, in which in the interiors, costliness of material and work, seemed to take the place of artistic inspiration; while the ostentatious piling up of costly stone exteriors, suffocated all efforts of living art. A heathen apotheosis of mere material wealth, against which gothic art was a religious protest; and concerning which John Ruskin has so earnestly and eloquently warned the men of his own day. Coldly inhuman, these towering piles of quarried stone, frowning above our city streets, seem as menacing as hostile fortresses.

The grand marble stairway of the capitol building in Albany, designed by Richardson, and said to be the most beautiful and costly example of elaborate carved work in the country, which has taken more than twelve years in its construction, seems to repeat, in the lavish profusion of its carving, something of the extravagance of the later renaissance. It is due, however, to the architects of this great building, Messrs. Fuller, Eidlitz and H. H. Richardson, to state that its exterior in nowise recalls the characteristics of those ostentatious buildings referred to; while it is well to remember that, if anywhere profusion of art decoration is fitly employed, it is in enriching and dignifying the impor-

tant public buildings designed for the uses of the people. In considering this particular people's palace, all who love art must ever remember that it was in this building, as has already been here stated, that William M. Hunt, the great painter, set to the American artists and builders of our time the striking lesson of noble art decoration so fortunately followed in the great public library buildings just completed.

In the zeal of this new awakening on the part of American architects and their employers to a practical recognition of the value of art in the decoration of the interior wall surfaces of public buildings—the most recent examples of which I have instanced—it should not be forgotten that, decades before these later buildings were planned, those who had charge of the construction of the grand building of the nation's capitol at Washington had freely availed themselves of the works of the American painters of their day, beginning as early as 1837, to illustrate memorable and pivotal events in the history of the republic; so that, on entering the grand rotunda, the visitors found themselves encircled by a series of large historical paintings, of a size in harmony with the colossal proportions of the encircling walls which supported the upspringing arches of the crowning dome; while in the dome itself, in a blaze of allegory, dear to the heart of Italy, was given the Italian artist's conception of the great powers essential to the prosperity of a people, and, though diplomatically disguised in appellation, a glimpse of the crowning triumph of the nation in its latest terrible struggle for existence. From the landing of Columbus to the coming of Lincoln,—he who runs may read; in the paintings, the bas-reliefs and the encircling frieze, "*in tempera*"—(though little can be said in praise of the artistic excellence of the relievos and the frieze)—the dramatic events of the centuries which have resulted in giving to the world the republic of these United States of America.

Our legislators called not only on the painters, but also

summoned the sculptors, to the adornment of this, the chief building of their country, and gradually important works by Greenough, Powers, Crawford and Rogers were secured. In addition to these works by native artists, the services of Italian artists, as decorators, were largely availed of in the halls, galleries and committee rooms of the building ; while in the wings, occupied, respectively, by the legislative chambers of the House of Representatives and the Senate, later American artists have added many fine works illustrating the history, or the scenery, of the country.

It has been a fashion with many writers, posing as art critics, to speak contemptuously of the historical paintings in the rotunda. However true their criticism may have been, if comparison of these paintings with the *chef d'œuvres* of the world's great artists — Titian, Tintoretto, Veronese, Velasquez, Rubens, and other great art masters in historical painting, either in their conception of the subject or mastery of technique, are concerned ; it should not be forgotten, in endeavoring to estimate the value of this art work to the country, that, a half century or more ago, few American citizens who entered that building had ever before had the opportunity to look upon a fine work of art of any kind. It followed, therefore, that the sight of that grand rotunda, with its uplifting dome, its great paintings, was an event never to be forgotten ; and the grandeur and inspiration of the scene gave to many their first realization of the meaning, the power, and the possibilities of art.

There have been American artists, before and since these works were painted, who justly rank as artists far in advance of Trumbull (though few have left works which can surpass in brilliancy his small, jewel-like originals of these large paintings, long the pride of the Yale college art gallery), Weir, Chapman, Vanderlyn, and Powell, the painters of the works in the rotunda ; but it may well be questioned whether, before 1870, any other American artists have given to so many of their fellow countrymen their first appreciation of something of the glory of art !

A debt of gratitude is due to the legislators who authorized and the artists who executed these works.

Nor, taken as a whole, are the art adornments of this, the noblest legislative building in the world, inferior to those of similar modern public buildings in European countries. Art in the early part of the nineteenth century, so far as shown in statuary on the exterior of buildings, was in nowise generally superior to the grandiose sculptures by Persico, which stand in the east portico of the rotunda; while the group by Greenough is far superior to the ordinary statuary of that day. Nor, in painting, was Trumbull so greatly inferior to his master, West! In fact, the era of the reign of the fourth George of England, and his immediate successor, was, nowhere in Europe, memorable as illustrating the highest ideals of art. Early in this century America had, in Allston and Stuart, art masters equal to their contemporaries of any other nations.

In view of this long-continued example of the possibilities of the artistic use of interior wall surfaces, as shown by the pictorial illustrations in the rotunda, of the history of the country, by well-known artists; and, also, by decorative paintings on minor wall spaces, which adorn the interiors of the nation's capitol building; the fact of the almost entire absence throughout this period of similar wall paintings and decorations in other civic public buildings in the land, as well as in churches, and private dwellings, so that the paintings by Hunt, in the state house, at Albany, can be accurately designated as marking the definite beginning of the present era of the general artistic interior decoration of buildings, civic and religious, public and private;—furnishes a convincing proof of the utter lack, on the part of the American people as a whole, of any general knowledge and appreciation of the value of art in its application to the buildings, and the furnishings, of life, prior to the holding of the Centennial exposition, in Philadelphia, in 1876.

It may well be urged that, up to that time, this busy people were too fully occupied in completing the physical con-

quest of a vast territory, in subduing forests, bridging streams and opening virgin prairies to cultivation; in providing for the transportation, housing, and feeding of the ever-surging incoming tides of eager emigrants; were in short too busy in their imperative task of *making* history; to find time, or thought, for its artistic record! When, at last, they found time to pause and study the lessons of that Centennial, they proved apt students; as the Columbian exposition has shown!

Yet notwithstanding this later surprising and artistic evolution of the American people, so widespread and rapid has been the development of technical training in its application to industrial and fine art manufactures throughout the leading countries of the continent of Europe, and also, though begun later, in Great Britain, that, although the development in elementary artistic training and its facilities for the acquisition of advanced instruction in these arts, in the United States, has been wonderfully increased since the beginning in Boston, in 1870, of the movement for school instruction in drawing, and the holding of the Centennial exposition in Philadelphia, in 1876; still, in the opportunities offered for the training of skilled youthful workers in the industries of applied art, the United States, to-day,—in view of the persistent efforts and great advances made during the past twenty years, by European countries, in providing such educational facilities,—are relatively, hardly in any better position to contest successfully with the products of the trained workers of Europe, than they were in 1870.

Nevertheless the efforts made in this country by leading educators, and by liberal patrons of artistic and technical education, have been notable, and most worthy of honor; while the great advance since the Centennial, as shown in the art qualities of American manufactures, in jewelry, in glass, in art fabrics in silk, in woolen and in cotton, as well as in architecture, and in all material pertaining to the decorative arts, has been simply marvellous.

So far, also, as affording requisite opportunities for acquir-

ing thorough training in the fine arts of painting, sculpture and architecture, the few art schools in the United States compare most favorably with those of the older countries; so that it is no longer essential — though it may often be, for other reasons, desirable — for the ambitious young painter, sculptor or architect, to exile himself in order to obtain needed opportunities for instruction in those several arts. Nor are our leading technical schools of science inferior in equipment or in quality of instruction to the similar schools in Europe. These schools in the United States are, however, so few in number, in proportion to our increasing population as compared to the number and variety of those offered to the citizens of the leading art industrial European countries of Germany, Switzerland, Belgium and France — not to mention Great Britain, Austria, Italy and Russia — that the inadequacy in numbers of our schools for training the captains of industry, not to mention those merely technical trade schools designed for creating a force of trained workers, impresses itself painfully upon the investigator in these fields.

With the increasing knowledge of the forces of nature acquired by the patient investigations continually carried on by scientists of every class, in chemistry, in geology, in natural philosophy, in mining, both in the methods of mechanical operations and in the reduction of ores; in short, in the general application of the discoveries of science throughout the various realms of nature, to the needs of man, which so constantly revolutionize former methods and create ever new demands; for example, in the endeavor to secure the economic production of electricity and to contrive the best methods for its application to human uses, not to speak of the similar needs in other fields, the demand on the community for the founding of institutions for giving thorough training in these latest discoveries of science is imperative.

In all these ever-recurring demands for the invention and application of methods by which to make these discoveries of science available in the industries of life, a knowledge of,

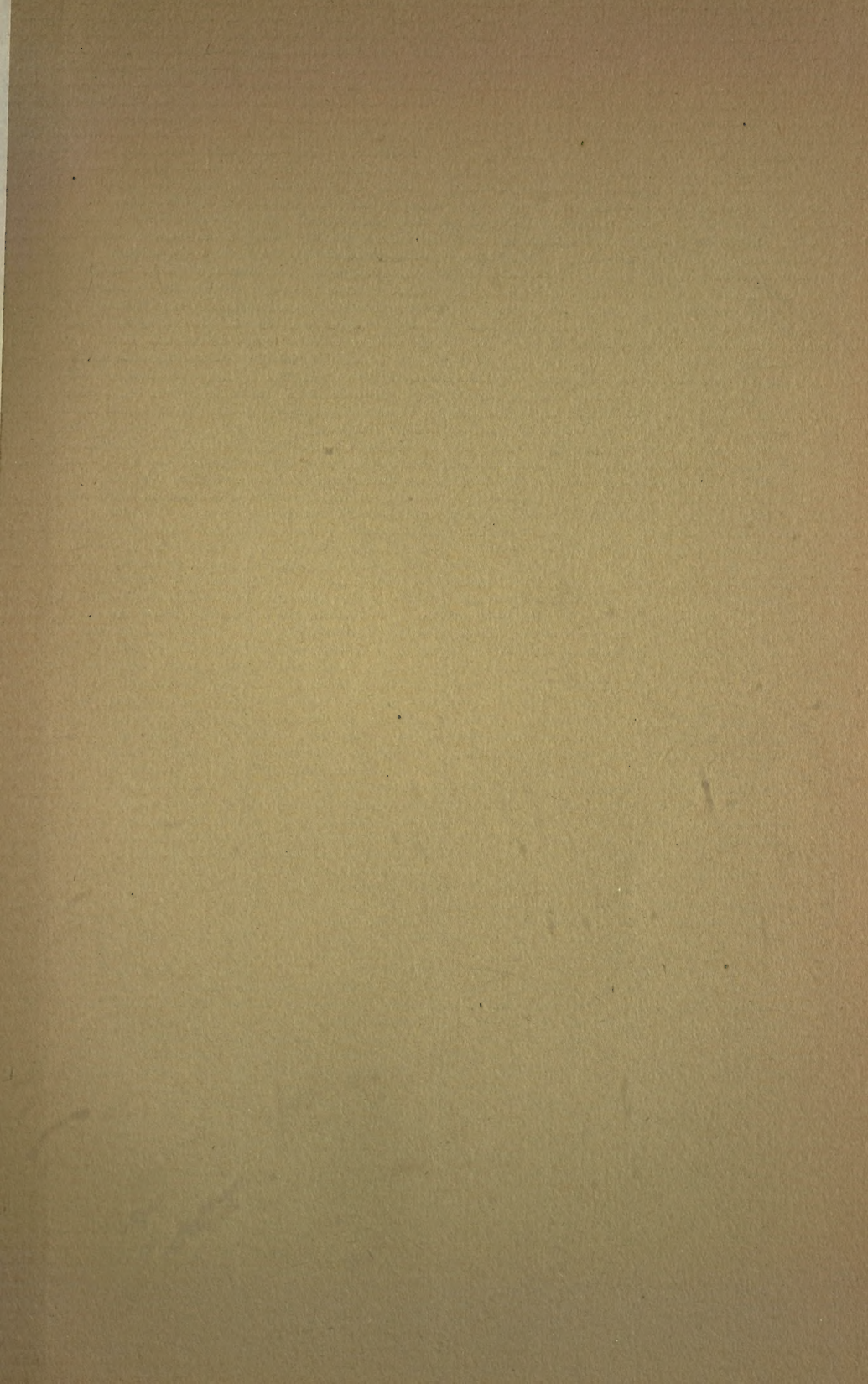
and practical facility in, the art of mechanical drawing," becomes absolutely indispensable; consequently, this elementary branch of industrial art clearly forms an essential factor in modern industrial education, and, of necessity, holds place in all the elementary and higher schools of technology; hence, though its relation to the so-called "high arts" may at times seem somewhat remote, its claim to a place in this report on art and industry is unquestionable.

To close this sketch of the beginning and progressive development of this important educational movement, without making honorable mention by name of some, at least, of the many enthusiastic supporters and earnest co-workers with the three men who were literally the pioneers in this momentous experiment, is to leave it incomplete, indeed. To give here a complete list of the many educators and lovers of beauty who gave it warm welcome; of the modest teachers who shrank from no labor in the effort to fit themselves to teach the unfamiliar lessons, were an impossible task. Great effort was made, however, by the writer in the volumes of the art and industry report, to secure full record of the names of all workers for this special branch of education. It may be said, greatly to the credit of our countrymen, that while there was at first, on the part of many, great and freely outspoken opposition to the movement, yet very many of the acknowledged leaders in educational circles—state or city—school superintendents, with professors in colleges and normal schools, gave instant and hearty welcome to Walter Smith and his methods; that the press generally gave support to the efforts to put both drawing and manual training in the schools, and that, as rapidly as the purpose and methods of industrial drawing were generally known, that movement won for itself popular support, while the movement for manual training in the schools was at once heartily welcomed by the great majority of the people.

One movement, almost cotemporary, for promoting instruction in the fine arts, both in the institutions of learning and in the community at large, met with cordial response

from many of the colleges and from numerous liberal citizens. As the result of generous gifts, public collections of casts from the antique became accessible in many institutions of learning and in many localities where, before 1870, they were absolutely unknown.

To patronize artists, and also to make art gifts to public museums and to colleges, became a fashion, so that great numbers of examples of the best modern art masters of Europe, are now in this country, either in the hands of private owners or in public art galleries. Meantime numbers of young American painters and sculptors are winning favor in Europe and America, while the art schools in this country are thronged with eager aspirants. Enough has been cited of American art accomplishment to convince us that one would no longer be justified in saying of this "era" of 1899, as was said of another era at the opening of this chapter, that "the one element absolutely lacking in all American education was the æsthetic!" Industrial art proves its worth to a country by its results, as shown in the industrial output. To record the amazing variety and exquisite charm of the countless productions of art work in metals, ceramics, and fabrics by Americans of *this* "era" would demand volumes.



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Butler, Nicholas Murray
Monographs on education

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